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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,989	02/06/2004	Robert K. Barr	52183	7098
7590 02/23/2006 EDWARDS & ANGELL, LLP P.O. Box 55874 Boston, MA 02205			EXAMINER KELLY, CYNTHIA HARRIS	
			ART UNIT 1752	PAPER NUMBER

DATE MAILED: 02/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/773,989	Applicant(s) BARR ET AL.	
	Examiner Cynthia H. Kelly	Art Unit 17 2 52	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.
2. Claim 8 refers to cyclopentanone based sensitizers but includes a formula, which includes compounds, which are not cyclopentanone based. In the instance when r is 3, the structure would represent a cyclohexanone.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tefler, US pat. No. 5,681,676 in view of Kuchta, US pat. No. 5, 112721.
5. Tefler teaches a method of applying a imaging composition comprising a sensitizer to a substrate (workpiece) and projecting a 3-D image onto the imaging composition so as to affect a color change in the imaging composition. Tefler notes that the difference between the Tefler reference and the application is that Tefler does necessarily use a cyclopentanone based conjugated sensitizer in his method. However, Kuchta in analogous art, teaches a cyclopentanone based conjugated sensitizer used in imaging compositions. Sensitizers are known as dyes and provide color in imaging compositions. See Kuchta, column 1, lines 27-30. Tefler teaches the use of several

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different types of dyes suitable for the invention including dyes, which can undergo a change in color upon increase in temperature. Kuchta's compounds fit this description. It would have been obvious to one of ordinary skill in the art to use the cyclopentanone compounds of Kuchta in the method of Tefler because Tefler's process requires dyes, which are radiation sensitive, and under color change with an increase of temperature.

6. Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufmann, US pat no. 6547397 in view of Tefler (above) and in further view of Kuchta (above).

7. Kaufmann teaches a 3-D imaging method comprising applying an imaging composition to a work piece, providing a 3-D imaging system, measuring the distance between the projector and a sensor in the workpiece, positioning the workpiece, applying energy to the imaging composition to affect a color change. Figure 1 of Kaufman is the same as figure 1 of the application. The range finding system determines the distance between the projector and a sensor as described in column 8. The optical signal is converted to a digital signal and analyzed by the controller module, element 210, which is the same as applying an algorithm to the results. See column 8, last paragraph through column 9, line 30. As shown in Figure 1, Kaufman teaches the energy beams from the projector fall on sensors and on an internal triangular shape of the workpiece which is not identified in Figure 1. However, because the energy beams fall on this area, it would have been obvious to one of ordinary skill in the art that this is the area to be imaged and must have an imaging composition thereon. Kaufman does not teach applying an imaging composition to a workpiece and applying the 3D imaging

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composition having a cyclopentanone based compound with an amount of energy to affect color change, Tefler teaches applicant's process of imaging 3D compositions. It would have been obvious to use the process of Tefler in the method of Kaufman because Tefler merely specifies the imaging process while Kaufmann outlines the manner in which the process is used in the laser system for projecting a 3D image. It would have been obvious to one of ordinary skill in the art to use the compound of Kuchta in the process of Tefler because Tefler's process requires radiation sensitive compound, which affect color change upon increase in temperature. The amounts of power the system projects and amount of energy are at conventional levels. By applicant's own admission, generally, more than 5mW of power for the laser is not used because this is known to present hazards to workers. (instant specification, page 3). The amount of energy is directly related to the amount of power used by the projection system and so can be optimized.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rosemary Ashton whose telephone number is 272-1326. The examiner can normally be reached on Mondays through Fridays. The examiner's supervisor, Cynthia H. Kelly, can be reached on 571 272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

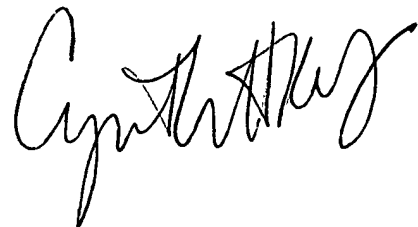
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Status information for unpublished applications is available through Private PAIR only.

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